The Implications of Regional and Provider-specific Variations in Medicare Spending for Medicare Payment Reform

Elliott S. Fisher, MD, MPH
Director, Population Health and Policy
The Dartmouth Institute for Health Policy and Clinical Practice

Professor of Medicine and Community and Family Medicine Dartmouth Medical School Hanover, NH

> Senior Associate, VA Outcomes Group White River Junction, VT

> Invited Testimony Committee on Ways and Means United States House of Representatives

> > April 1, 2009

The Implications of Regional and Provider-specific Variations in Medicare Spending for Medicare Payment Reform

Summary of Major Points

Thank you Mr. Chairman, Congressman Camp, and distinguished members of the Committee for your kind invitation to join you today.

Variations in per-capita health care spending are now well recognized. Less well known is that growth in spending has also varied dramatically across the United States. (Slide 1)¹ These differences may appear small, but compounding makes a difference: if all U.S. regions grow over the next 15 years at the rate observed for the last 15 in San Francisco, the Medicare program would be approximately \$1.4 trillion dollars better off than under current growth rates.

What explains higher spending? Almost all of the differences in spending across both regions and academic medical centers are due to greater use of what we refer to as "supply-sensitive services". (Slide 2) Medicare beneficiaries in higher spending regions are hospitalized more frequently for conditions that could be treated outside the hospital, see physicians more frequently overall, are referred to specialists more often, have a much smaller proportion of their visits to primary care physicians, and have many more different physicians involved in their care.

And more care isn't always better for patients. Patients in high spending regions report lower quality of care. Physicians describe greater difficulty communicating with other physicians or maintaining adequate continuity with their patients. The safety and reliability of care is worse in higher spending regions. And health outcomes – such as survival following a heart attack – are no better or worse in high spending regions.

What is going on? (Slide 3) We believe that lower quality and worse outcomes are

-

¹ Slides used during the oral presentation are attached as an Appendix, after the references.

largely a consequence of a payment system that reinforces fragmentation, rewards the growth of profitable but unnecessary services, and ensures that existing and new capacity is fully utilized. Most medical decisions are in the "gray areas" where judgment is required. Physicians therefore adapt their practices to the local availability of medical specialists and hospital beds. Income pressures on both hospitals and physicians motivate the purchase of new, profitable technologies and the referral of more complicated patients to specialists or their admission to the hospital. And the poor quality we see in high spending regions is a direct consequence of this increasing fragmentation.

If we are to improve quality and slow spending growth, we must adhere to three principles. First, we must foster the development of integrated and organized local care systems with a strong foundation in primary care. Second, we need to move rapidly toward performance measurement that fosters accountability for care coordination, health outcomes and the overall cost of care. Third, we need to shift toward payment methods that reward value: better care, better health and lower costs.

We have proposed the development of Accountable Care Organizations as one approach to meeting these goals.(Slide 4) An Accountable Care Organization is a local network of providers that can manage the full continuum of care for all patients receiving care within their network. They must be of sufficient size to allow for accurate measurement of both quality and total costs. Examples of current organizations that could easily meet these requirements include primary care or multispecialty networks, (such as independent practice associations or physician-hospital organizations), hospitals that employ their own physicians (such as many academic medical centers), and integrated delivery systems. Our research has shown that formation of ACOs would require little disruption of current physician referral patterns and that almost all physicians and hospitals could feasibly participate in such networks.

The payment reform has two key elements. First, CMS and, ideally, private payers, would establish a spending benchmark by predicting next year's costs for patients

receiving their care from the ACO. Second, if quality standards were met and actual costs for the year are below the spending benchmark, the savings would be shared between the providers and the payers. The approach does not require any changes to current fee-for-service reimbursement administrative systems. It does not require patients to be locked-in to a specific provider. The proposal builds directly on a recently extended CMS demonstration project – the Physician Group Practice demonstration.

Congress has an important opportunity to align performance measurement and payment reform initiatives to support accountability.(Slide 5) Performance measurement and payment reforms already underway should be supported and strengthened while shifting the emphasis toward enhancing coordination, improving health outcomes and reducing overall costs. For the many physicians currently in solo or small group practice, we should provide support and incentives for them to form provider-networks that could become eligible for shared savings payments as eventual Accountable Care Organizations. And for those already in networks or integrated systems, CMS should quickly establish criteria for participation in ACO shared savings payment systems that could reward better quality and lower costs.

Thank you Mr. Chairman, Congressman Camp, and distinguished members of the Committee for your invitation to address you today.

Rapidly rising health care costs pose a serious threat not only to the future of public and private health insurance coverage but also to the sustainability of efforts to expand coverage to the nearly 50 million uninsured Americans. Many policy experts have concluded that excessive growth in health care spending is a foregone conclusion, driven by inexorable forces. Most blame advancing technology. And some conclude that only by rationing beneficial care will the U.S. be able to achieve a sustainable and affordable future.

Data recently released by the Dartmouth Atlas Project call each of these assertions into question. Figure 1, reprinted from a recent commentary we wrote in the New England Journal of Medicine ¹, shows average age-, sex-, and race-adjusted per-capita Medicare spending in five U.S. hospital-referral regions over the past 15 years. During this period, overall Medicare spending, adjusted for general price inflation, rose by 3.5% annually. But there was marked variation across regions. Per-capita inflation-adjusted spending in Miami grew at 5.0% annually, as compared with just 2.3% in Salem, Oregon. A total of 26 hospital-referral regions (including Dallas) had more rapid spending growth than Miami, and 16 regions (including San Diego) had slower growth than Salem, Oregon.

In the remainder of my testimony, I will briefly summarize the key findings of our research on variations in Medicare spending, what we have learned about the likely causes of these differences, and then discuss why fostering accountability for the overall costs and quality of care should be a central strategy in striving to reform our health care delivery system.

Variations in Medicare Spending

Over thirty years ago, John Wennberg published his seminal article documenting the remarkable variations in practice and spending across small areas of Vermont. With core support from the Robert Wood Johnson Foundation, and more recently from the National Institutes of Aging, we applied these methods to the Medicare population and found variations of a similar magnitude. Most of the variation in spending across regions or across hospitals and the populations they serve are not explained by differences in illness levels or by differences in prices (although these do account for some portion of the variation).

Most of the differences in spending are due to greater use of what we refer to as "supply-sensitive services", which we define as services where the local supply of the specific resource has been shown empirically to be strongly associated with the use of the services delivered by that provider. ⁵ Figure 2 compares the utilization of services across each of the U.S. regions highlighted in the first figure. Medicare beneficiaries in higher spending regions are hospitalized more frequently for conditions that could be treated outside the hospital: hospitalization rates in the Medicare population for Ambulatory Care Sensitive Conditions are twice as high in Miami as in Salem. Among Medicare

beneficiaries with serious chronic illness, the frequency of physician visits is nearly twice as high in Miami as in San Francisco. Lower spending regions have a much higher proportion of care provided by primary care physicians. Higher spending regions have much more fragmented delivery systems: a much higher proportion of the population has 10 or more different physicians involved in their care during a given year.

Two critical questions are raised by these studies. What are the benefits, if any, of higher spending and greater use of supply sensitive services across US regions and hospitals? And, what are the causes of the differences in access and quality?

What are the benefits of higher spending?

Over the past 10 years, a number of studies have explored the relationship between higher spending and the quality and outcomes of care (Figure 3). The findings are remarkably consistent: higher spending does not result in better quality of care, whether we look at the technical quality and reliability of hospital or ambulatory care⁶⁻⁸, survival following such serious conditions as a heart attack or hip fracture^{9, 10}, or patients' perceptions of the accessibility or quality of medical care and their experiences in the hospital. ^{8, 11, 12} Even physicians in high spending regions report that they have greater difficulty providing good care. Remarkably – in regions where the numbers of hospital beds and specialists are *greater*, physicians are *more* likely to report difficulty getting their patients into the hospital or an appointment with a specialist. ¹³ Access is worse where there are more medical resources – a "paradox of plenty".

What's going on? Why are access and quality worse in high spending regions?

Recent studies have also examined the causes of the differences in practice and spending. Patients' preferences for care vary only slightly across regions. ^{11, 14, 15} Malpractice is reported by many physicians to influence their practice, but differences in the malpractice environment explain only 10% of state variations in spending. ¹⁶

As suggested above, differences in supply are clearly important. In a payment system where provider incomes depend upon the volume of services they provide, patients in regions with more physicians have more frequent visits to physicians and patients in regions with more hospital beds per-capita are hospitalized more often. ⁸ Local supply thus explains a substantial share of regional variations in spending. But some recent work also points to the key role of the discretionary decisions doctors make. ^{17, 18} These studies found that physicians' decisions in higher spending regions were similar to those in low spending regions in cases where there is strong evidence for a treatment course (such as whether to refer a patient with chest pain and an abnormal stress test to a cardiologist). But in cases where judgment is required (such as whether to admit a patient with heart failure to the hospital, how frequently to see a patient with high blood pressure, and whether to refer to a specialist for heartburn), physicians in high spending regions were much more likely to intervene than those in low spending regions.

A likely diagnosis. Current clinical evidence is an important, but limited influence on clinical decision-making. Most physicians practice within a local organizational context and payment environment that profoundly influences their clinical decisions, especially in discretionary settings. In most locales, hospitals and physicians are rewarded for

expanding capacity (especially for highly profitable services) and for recruiting additional procedure-oriented specialists (such as interventional cardiologists or radiologists). When there are more specialists or hospital beds available, primary care physicians and specialists will learn to rely on those specialists and use those beds – because it is more "efficient" from their perspective to do so, given the current payment system and lack of support for primary care. And what is seen as excessive in one community (e.g doctors owning their own CT or MRI scanner), is quite acceptable in another. The consequence is that what seem to be "reasonable" decisions collectively lead to higher utilization rates, greater costs, and, inadvertently, worse quality of care and worse outcomes.

Harm could occur through several mechanisms. ¹⁹ Greater use of diagnostic tests could find more abnormalities that would never have caused the patient any problem (a condition referred to as "pseudodisease"). Because most treatments have some risks, providing those treatments to patients who don't need them could cause harm. Hospitals are dangerous places to be if you could have been safely treated outside the hospital. And as care becomes more complex and more physicians are involved, it will be less and less clear who is responsible for each aspect of a patient's care. Miscommunication and errors become more likely.

Implications: integrated delivery, performance measurement and payment reform

If we are to improve quality and slow spending growth, the research points to three principles that can help guide delivery system reform efforts. First, we must foster the development of integrated and organized local care systems with a strong foundation in primary care that can be held accountable for the overall costs and quality of care and that can be responsible for aligning the capacity of their care system with the needs of the population they serve. Second, we need to move rapidly toward performance measures for all providers that encourage accountability for care coordination, health outcomes and the overall cost of care. Third, we need to shift toward payment methods that reward value: better care, better health and lower costs.

Accountable Care Organizations – a piece of the puzzle

We have proposed the development of Accountable Care Organizations as one approach to meeting these goals and providing better support to clinicians in their efforts to improve care for Medicare beneficiaries. Working with Mark McClellan and others, we have developed design specifications and approaches to shared-savings payment that would support the development of Accountable Care Organizations as a key element of moving toward more integrated delivery systems and toward slowing the growth of spending. ²⁰

An Accountable Care Organization is a local network of providers that can manage the full continuum of care for all patients within their provider network. They must be of sufficient size to allow accurate measurement of both quality and total costs. An ACO must have a defined administrative structure that is capable of meeting reporting requirements for the quality measures that will be expected and for receiving and distributing shared savings payments. Examples of current organizations that could meet

these requirements include multispecialty group practices, independent practice associations, physician-hospital organizations and integrated health systems, such as academic medical centers. Our research has shown that because most physicians already practice within relatively coherent and well-defined referral networks around one or more hospitals, ²¹ formation of ACOs would require little disruption of current physician referral patterns and that almost all physicians and hospitals could feasibly participate in such networks. ^{20, 22}

Payment reform under the ACO model would have two key elements. First, CMS and, ideally, private payers, would predict next year's costs for patients already receiving their care from the ACO. Second, if actual costs were then below this benchmark, savings would be shared between the providers and the payers, after an initial savings threshold was met. Quality measures would also have to be met for an ACO to be eligible for shared savings payments. The approach builds directly on a current CMS demonstration project – the Physician Group Practice demonstration. A payment reform proposal based on a similar approach was judged to be cost-saving by the Congressional Budget Office.

Because the natural referral networks upon which ACOs are likely to be built provide a large proportion of the care to their Medicare beneficiaries, there would be no need for beneficiaries to be "locked-in" to their ACO. As the early experience of the Physician Group Practice demonstration suggests, this provides an incentive for the ACO to provide high quality, patient centered care and to reach out effectively to their patients and other providers outside the ACO to effectively coordinate care.

Moving forward

Congress has an important opportunity to ensure that the performance measurement and payment reform initiatives already underway and those planned are aligned to support the broader goals of coordination, integration, and shared accountability among all providers for quality, health outcomes and overall costs. Three complementary efforts deserve serious consideration.

First, performance measurement and payment reforms should be strengthened by shifting the emphasis toward approaches that foster improved coordination, health outcomes and overall costs. Examples would include: *Health Information Technology:* support for the development of interoperable electronic health records that incorporate clinical registries and ever-advancing quality and outcome measurement capabilities; *Performance Measurement:* a shift from provider-specific measures of technical quality that reinforce the fragmentation of care to patient-centered measures that evaluate longer term outcomes and costs across episodes of care ^{24, 25}; *Payment reforms:* the development of bundled and episode payments that reward innovation in care and lower costs²⁶ and the development of medical home payment models emphasizing accountability for overall costs and quality.

Second, we should provide support and payment incentives for the development of provider networks that could become eligible to participate as Accountable Care

Organizations in shared savings programs. Practical steps would include technical support to help providers understand the natural physician and hospital referral networks within their local market; data on the cost and quality performance of these networks; development of protocols to support quality reporting at the ACO level; and bonuses for public reporting at the ACO level even in the absence of shared savings payments.

Finally, Congress should call on CMS to immediately develop a template that will allow interested provider networks to participate in an ACO shared savings program. Key elements would include defining the eligibility criteria for provider organizations, developing performance measurement standards for initial participation, establishing a process for defining and updating both quality and spending benchmarks, and defining the schedule whereby savings are shared between payers and providers.

Conclusion

The marked variations in spending growth across regions suggest that it should be possible to achieve sustainable and affordable spending growth, even under the current fee-for-service system. This will require providing incentives that encourage providers in low cost and low growth regions to continue their current trends while providing incentives for those in high growth and high cost regions to avoid further growth in capacity and in the intensity of services. The good news is that small inflections in annual per-capita growth rates have enormous implications for the long-term solvency of Medicare and the sustainability of expanded insurance coverage. Using data from the 2008 Medicare Trustee's Report on projected revenues and total Part A and B spending, we estimate that Medicare will be \$660 billion in the hole by 2023. Reducing annual growth in per-capita spending from 3.5% (the national average) to 2.4% (the rate in San Francisco) would leave Medicare with a healthy estimated balance of \$758 billion, a cumulative savings of \$1.42 trillion. ¹

Such a change would not solve the country's long-term fiscal challenges. But it suggests that if we focus reform efforts on current areas of overspending — overuse of hospitals and unnecessary visits, consultations, tests, and minor procedures — we may be able to bend the cost curve while continuing to enjoy the benefits of technological advances.



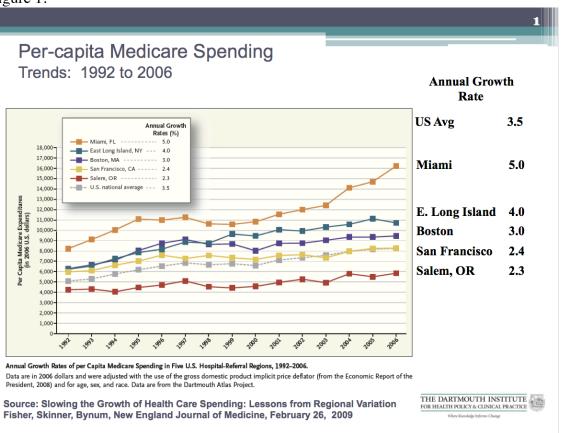


Figure 2.

15410 2.					
					2
	nigher spend sensitive servic				
	Rate of Avoidable Admissions ¹	Physician Visits ²	Ratio Primary Care to Specialist visits ²	Percent seeing 10 or more MDs ²	_
Miami	95	106	0.72	51	_
E. Long Island	75	91	0.97	50	
Boston	81	59	1.20	39	
San Francisco	52	64	1.12	32	
Salem	44	38	1.30	18	_

Notes

- 1. Ambulatory Care Sensitive Hospitalizations per 1000 Medicare beneficiaries
- 2. Utilization during last 2 years of life, Medicare beneficiaries with serious chronic illness.

Exhibit 3. Relations Content, Quality, and	hip Between Regional Differences in Spending and the l Outcomes of Care		
	Higher-Spending Regions Compared to Lower- Spending Ones*		
Health care resources	 Per capita supply of hospital beds 32% higher. ⁸ Per capita supply of physicians 31% higher overall: 65% more medical specialists. ⁸ 		
Technical quality	• Adherence to evidence-based care guidelines worse. ^{6,8}		
Health outcomes	 Mortality slightly higher following acute myocardial infarction, hip fracture, and colorectal cancer diagnosis⁹ Trends in survival following acute myocardial infarction no better in regions with higher growth in spending. ¹⁰ 		
Physician perceptions of quality	 More likely to report poor communication among physicians and inadequate continuity with patients ¹³ Greater difficulty obtaining inpatient admissions or high-quality specialist referrals. ¹³ 		
Patient-reported quality of care	 Worse access to care and greater waiting times⁸ No difference in patient-reported satisfaction with care. ^{8,11} Worse inpatient experiences of care. ¹² 		

^{*} High- and low-spending regions were defined as the U.S. Hospital Referral Regions in the highest and lowest quintiles of per capita Medicare spending as in Fisher (2003).

References

- 1. Fisher ES, Bynum JP, Skinner JS. Slowing the growth of health care costs--lessons from regional variation. N Engl J Med 2009;360:849-52.
- 2. Wennberg J, Gittelsohn. Small area variations in health care delivery. Science 1973;182:1102-8.
- 3. Wennberg JE, Fisher ES, Skinner J, et al The Dartmouth Atlas of Health Care, 1996. Hanover, NH: The Dartmouth Atlas Project; 1994.
- 4. Congressional Budget Office. Geographic Variation in Health Care Spending. Washignton, DC: Congressional Budget Office; 2008 February 2008.
- 5. Wennberg JE, Fisher ES, Skinner JS. Geography and the debate over Medicare reform. Health Aff (Millwood) 2002;Supp Web Exclusives:W96-114.
- 6. Baicker K, Chandra A. Medicare Spending, The Physician Workforce, And Beneficiaries' Quality Of Care. Health Aff (Millwood) 2004.
- 7. Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ. Variations in the longitudinal efficiency of academic medical centers. Health Aff (Millwood) 2004;Suppl Web Exclusive:VAR19-32.
- 8. Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending. Part 1: the content, quality, and accessibility of care. Ann Intern Med 2003;138:273-87.
- 9. Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending. Part 2: health outcomes and satisfaction with care. Ann Intern Med 2003;138:288-98.
- 10. Skinner JS, Staiger DO, Fisher ES. Is technological change in medicine always worth it? The case of acute myocardial infarction. Health Aff (Millwood) 2006;25:w34-47.
- 11. Fowler FJ, Jr., Gallagher PM, Anthony DL, Larsen K, Skinner JS. Relationship between regional per capita Medicare expenditures and patient perceptions of quality of care. JAMA 2008;299:2406-12.
- 12. Wennberg JE, Bronner K, Skinner JS, Fisher ES, Goodman DC. Inpatient care intensity and patients' ratings of their hospital experiences. Health Aff (Millwood) 2009;28:103-12.
- 13. Sirovich B, Fisher ES. Regional variations in health care intensity and physicians' perceptions of care quality. Ann Intern Med 2006;145:789.
- 14. Pritchard RS, Fisher ES, Teno JM, et al. Influence of patient preferences and local health system characteristics on the place of death. SUPPORT Investigators. Study to Understand Prognoses and Preferences for Risks and Outcomes of Treatment. J Am Geriatr Soc 1998;46:1242-50.
- 15. Barnato AE, Herndon MB, Anthony DL, et al. Are regional variations in end-of-life care intensity explained by patient preferences?: A Study of the US Medicare Population. Med Care 2007;45:386-93.
- 16. Baicker K, Fisher ES, Chandra A. Malpractice liability costs and the practice of medicine in the Medicare program. Health Aff (Millwood) 2007;26:841-52.

- 17. Sirovich BE, Gottlieb DJ, Welch HG, Fisher ES. Variation in the tendency of primary care physicians to intervene. Arch Intern Med 2005;165:2252-6.
- 18. Sirovich B, Gallagher PM, Wennberg DE, Fisher ES. Discretionary decision making by primary care physicians and the cost of U.S. Health care. Health Aff (Millwood) 2008;27:813-23.
- 19. Fisher ES, Welch HG. Avoiding the unintended consequences of growth in medical care: how might more be worse? Jama 1999;281:446-53.
- 20. Fisher ES, McClellan MB, Bertko J, et al. Fostering Accountable Health Care: Moving Forward In Medicare. Health Aff (Millwood) 2009.
- 21. Bynum JP, Bernal-Delgado E, Gottlieb D, Fisher E. Assigning ambulatory patients and their physicians to hospitals: a method for obtaining population-based provider performance measurements. Health Serv Res 2007;42:45-62.
- 22. Fisher ES, Staiger DO, Bynum JP, Gottlieb DJ. Creating accountable care organizations: the extended hospital medical staff. Health Aff (Millwood) 2007;26:w44-57.
- 23. Congressoinal Budget Office. Budget Options, Volume 1. Washington, DC: Congressional Budget Office; 2008.
- 24. Institute of Medicine. Performance Measurement: Accelerating Improvement. Washington, DC: National Academies Press; 2006.
- 25. National Quality Forum. Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care. Washington, DC: National Quality Forum; 2009 2009.
- 26. Hackbarth G, Reischauer R, Mutti A. Collective accountability for medical caretoward bundled Medicare payments. N Engl J Med 2008;359:3-5.

Slides used in oral presentation

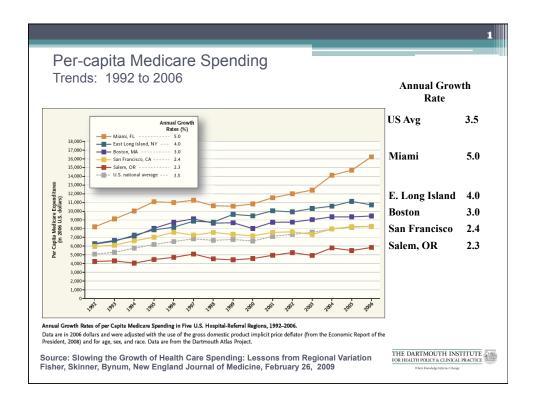
Accountable care

A path forward to improving quality, reducing costs

House Ways and Means Committee April 1, 2009

Elliott Fisher, MD, MPH

The Dartmouth Institute for Health Policy and Clinical Practice



Slides used in oral presentation

What does higher spending buy? *More "supply-sensitive services"*

	Rate of Avoidable Admissions ¹	Physician Visits ²	Ratio Primary Care to Specialist visits ²	Percent seeing 10 or more MDs ²
Miami	95	106	0.72	51
E. Long Island	75	91	0.97	50
Boston	81	59	1.20	39
San Francisco	52	64	1.12	32
Salem	44	38	1.30	18

Notes

- 1. Ambulatory Care Sensitive Hospitalizations per 1000 Medicare beneficiaries
- 2. Utilization during last 2 years of life, Medicare beneficiaries with serious chronic illness.

And more isn't better

- (1) Fisher et al. Ann Intern Med: 2003; 138: 273-298
- (2) Baicker et al. Health Affairs web exclusives, October 7, 200.
- (4) Skinner et al. Health Affairs web exclusives, Feb 7, 2006
- (5) Sirovich et al Ann Intern Med: 2006; 144: 641-649
- (6) Fowler et al. JAMA: 299: 2406-2412

What is going on? What needs to be done?

Payment system reinforces fragmentation, rewards growth and ensures that current (and new) capacity is fully utilized

- Physicians adapt their practices to existing capacity
- Income pressures (price cutting) motivate the purchase of new technology; referral of more complicated patients
- Poor quality a direct consequence of fragmentation.

Principles to guide reform

- Foster development of integrated and organized local care systems with strong primary care foundation
- Performance measurement that fosters accountability for care coordination, health outcomes, and overall costs
- Payment reform that rewards value better care, better health, lower costs.



Slides used in oral presentation

Accountable Care Organizations
Integration, accountability and value-based payment

What is an Accountable Care Organization?

- Local network of providers that can manage full continuum of care for all patients within their network. Big enough for stable quality / cost measurement.
- Examples: Independent Practice Associations, Physician-Hospital organizations, multispecialty group practices, academic medical centers
- Would require little disruption of current referral networks.

How would payment reform work?

- CMS (and/or private payers) predict next years costs for patients already receiving care within the ACO.
- If actual costs are below this benchmark, savings are shared between providers and payers. Quality measures must also be met.
- Builds directly on existing CMS Physician Group Practice demonstration



